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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,253	04/14/2004	Ramesh Rajagopal	03797.00769	6426

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WASHINGTON, DC 20005-4051

EXAMINER

LEE, MARINA

ART UNIT	PAPER NUMBER
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2192

MAIL DATE	DELIVERY MODE
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10/30/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/824,253

Applicant(s)

RAJAGOPAL ET AL.

Examiner

Marina Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date November 17, 2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the application filed on April 14, 2004.
2. Claims 1-18 are pending and have been examined.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As to claim 1, recites, "A computer-readable medium having stored thereon a data structure for a type system... the data structure comprising:

a) a base class for capturing... and b) at least one controller object,...".

The "data structure", here as presently drafted merely amount to a non-functional descriptive material, as there is no "act" actually being performed. –See *MPEP* 2106.01(II).

Claims 2-10 recite the limitations that do not cure the deficiency of the base claim 1, which regarding to the rejection of non-statutory under 35 USC 101. Therefore, they are also rejected for not meeting the statutory under 35USC 101.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-18 are rejected under 35U.S.C. 102(b) as being anticipated by Iborra et al., (hereinafter – Iborra), (U.S. Patent Application Publication No. 2002/0100014 A1).

As to claim 1, Iborra discloses a computer-readable medium (e.g., floppy disk – see page 6, [0075]) having stored thereon a data structure for a type system, the data structure providing requested services on an artifact in the type system, the data structure comprising:

a) a base class for capturing common functionality of objects of the type system (e.g., Conceptual Model produce in UML modeling by CASE TOOL 210). – See (step 200 and 210, Fig. 1, page 7: [0082]: 1-11, and CASE Modeler section begin at page 7:[0085] and following); and

b) at least one controller object, the controller object in communication with the base class, the at least one controller object validating the requested services based on a set of rules associated with a programming language (e.g., system logic translator 232 implement a precise execution model that corresponds to the validated formal specification 215 (OASIS language) – See (page 7: [0083] and associated text).

As to claim 2, Iborra further discloses wherein the artifact comprises one or a namespace, a class, an interface, an enumeration, a delegate, an attribute, a field, a property, and an event (e.g., the CASE tool 210 collects information

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organized around projects which correspond to different applications. Each project built by the CASE tool 210 can include information about classes, relationship between classes, global transactions, global functions, and view). – See (page 7-8: [0088]-[0095] and related text).

As to claim 3, Iborra further discloses wherein the programming language comprise one of Visual Basic, C++, C#, and J# (e.g., Translator 232 automatically write a complete working program for the formal specification into working code in some target computer language such as Visual Basic, C++, assembly code for any microprocessor, etc.). –See (page 3: [0025]).

As to claim 4, Iborra discloses further wherein the base class determines the at least one controller object to communicate with in order to validate the request services (e.g., the CASE tool 210 captures a formal specification of the designer's system "on the fly" according to a formal specification language while the designer is specifying the system with the CASE tool 210). See (page 7: [0086]).

As to claim 5, Iborra further discloses wherein the data structure further comprises:

c) a first class providing a level of abstraction between a second class and a third class, the second class and the third class searchable by the first class (e.g., inheritance classes between parent and child classes – see page8: [0093]: 1-3 & 8-14 and Fig. 9C).

As to claim 6, Iborra further discloses wherein the second class and the third class comprise nested classes (e.g. aggregation classes – see page 8: [0093]: 1-9 and Fig. 9C).

As to claim 7, Iborra further discloses wherein the second class and the third class include nested namespaces. (See page 5, [0067], Fig. 19 and page 25, [0541]).

As to claim 8, Iborra further discloses wherein the data structure further comprises:

d) a container for storing types in the type system (e.g., OASIS template – See page 33, [0662]: 6-8).

As to claim 9, Iborra further discloses wherein the requested services comprise modifying the artifact in the type system (see page 5, [0056], Fig. 9C, pages 20-21, [0335]-[0393], and page 5 [0063], Fig. 15, Pages13-14, [0477]-[0479]).

As to claim 10, Iborra further discloses wherein the requested services comprise creating a new artifact in the type system (see page 23, [0457] and [0468]).

As to claim 11, Iborra discloses a method of modifying an artifact for use in a type system meta-model (see page 5, [0056], Fig. 9C, pages 20-21, [0335]-[0393], and page 5 [0063], Fig. 15, Pages13-14, [0477]-[0479]), the method comprising:

- a) receiving a request from an application programming interface to modify an artifact in the type system meta-model(see page 5, [0056],

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Fig. 9C, pages 20-21, [0335]-[0393], and page 5 [0063], Fig. 15, Pages 13-14, [0477]-[0479]).

- b) in response to a) issuing a least one instruction to a language specific controller rules associated with a programming language (e.g., Conceptual Model produce in UML modeling by CASE TOOL 210). – See (step 200 and 210, Fig. 1, page 7: [0082]: 1-11, and CASE Modeler section begin at page 7: [0085] and following); and
- c) in response to a validated request from the language specific controller, modifying the artifact (e.g., system logic translator 232 implement a precise execution model that corresponds to the validated formal specification 215 (OASIS language) – See (page 7: [0083] and associated text).

As to claim 12, Iborra also discloses wherein the method further comprise the step of:

- d) transmitting a response to the application programming interface that the artifact has been modified (see page 7 [0083]: 6-9).

As to claim 13, Iborra further discloses wherein the artifact comprises one of a namespace, a class, an interface, an enumeration, a delegate, an attribute, a field, a property, and an event (e.g., the CASE tool 210 collects information organized around projects which correspond to different applications. Each project built by the CASE tool 210 can include information about classes, relationship between classes, global transactions, global functions, and view). – See (page 7-8: [0088]-[0095] and related text).

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As to claim 14, Iborra further discloses wherein the programming language comprises one of Visual Basic, C++, C#, and J# (e.g., Translator 232 automatically write a complete working program for the formal specification into working code in some target computer language such as Visual Basic, C++, assembly code for any microprocessor, etc.). –See (page 3: [0025]).

As to claim 15, Iborra discloses a method of creating an artifact for use in a type system meta-model (see page 23, [0457] and [0468]), the method comprising:

a) receiving a request form an application programming interface to create an artifact in the type system meta-mode (see page 23, [0457] and [0468]);

b) in response to a) issuing at least one instruction to a language specific controller object, the language specific controller object validating the request based on rules associated with a programming language (e.g., Conceptual Model produce in UML modeling by CASE TOOL 210). – See (step 200 and 210, Fig. 1, page 7: [0082]: 1-11, and CASE Modeler section begin at page 7:[0085] and following); and

c) in response to a validated request form the language specific controller, creating the artifact(e.g., system logic translator 232 implement a precise execution model that corresponds to the validated formal specification 215 (OASIS language) –See (page 7: [0083] and associated text).

As to claim 16, Iborra also discloses wherein the method further comprises the step of:

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d) transmitting a response to the application programming interface that the artifact has been created (see page 7 [0083]:6-9).

As to claim 17, Iborra further discloses wherein the artifact comprises one of a namespace, a class, an interface, an enumeration, a delegate, an attribute, a field, property, an event (e.g., the CASE tool 210 collects information organized around projects which correspond to different applications. Each project built by the CASE tool 210 can include information about classes, relationship between classes, global transactions, global functions, and view). –See (page 7-8: [0088]-[0095] and related text).

As to claim 18, Iborra further discloses wherein the programming language comprises one of Visual Basic, C++, C#, and J# (e.g., Translator 232 automatically write a complete working program for the formal specification into working code in some target computer language such as Visual Basic, C++, assembly code for any microprocessor, etc.). –See (page 3: [0025]).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to application disclosure.

Berenbach et al., (US 2005/0076328 A1) is cited to teach rule-based system and method for checking compliance of architectural analysis and design models.

Bussler et al. (US 2005/0125806 A1) is cited to teach system and method for validating objects models.

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Sreedhar et al. (US 2005/0071806 A1) is cited to teach variational modeling using extension types.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marina Lee whose telephone number is (571) 270-1648. The examiner can normally be reached on M-F (11:00 am to 7:30 pm) Est..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

M.L.
October 22, 2007



TUAN DAM
SUPERVISORY PATENT EXAMINER